

Sample Editor V1.4 Documentation

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REVISION HISTORY

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Chapter 1

Sample Editor V1.4 Documentation

1.1 First of all

Sample Editor V1.4 Documentation

by Dario Abatianni

November 3rd, 1995

Welcome to the documentation file for the »Sample Editor V1.4«. In here you will find all the information you need to use the program correctly. All files in this distribution are shareware and ©1995 Dario Abatianni. You may copy them freely to all of your friends. See the chapter about distributing for more details.

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1.2 Distribution...

COPYRIGHT AND DISTRIBUTION

Sample Editor V1.4 is ©1995 Dario Abatianni. I give hereby my permission to copy this manual, as long as it is left unchanged. All the information in this document is written to the best of my knowledge. It may be that in your version of Sample Editor some minor changes have been made and that this manual is not 100% equal with all functions of the program.

The package is freely distributable (except your personal [.keyfile](#)) but

still copyright by Dario Abatianni. This means that you can copy Sample Editor V1.4 as long as you don't ask for more than the cost of the disk and no changes to any of the files have been made. All files have to be kept and copied together.

Permission is granted to include this program in Public-Domain series and it may also be uploaded to BBS's. The program is NOT to be used or sold as (part of) a commercial product although the samples edited with it may.

The included BevelBox.Library is also ©1995 by Dario Abatianni. It is published as freeware and may be used by anyone for own productions.

1.3 Don't blame me...

DISCLAIMER

The programmer of Sample Editor V1.4 can NOT be made responsible for any damage which is caused by using it. By intensive testing and running in various environments the program had shown to be error-free.

If you still find any bugs then don't hesitate to **contact** me, for I am always glad to remove one of those nasty insects.

1.4 Registration...

REGISTRATION

This version of Sample Editor is working at 100% but with every menu selection an "Annoying Requester" will pop up to remind you, that your version is not registered 8-).

As Sample Editor V1.4 is shareware, you may use it freely for about one week after receiving it. If you like this piece of code it would be nice of you to send me the registration fee of 10 US\$ or 15 DM. I will return you a disk with the latest version of Sample Editor and your personal .keyfile. After you have copied this file to your ENVARC: and ENV: drawers the Annoying Requester that pops up at every menu selection will be locked and you may work undisturbed 8-).

To register write to the **address** given below.

1.5 Information...

WHAT IS SAMPLE EDITOR V1.4

As you might have guessed by the name it is a tool to edit your samples.

Why another one of this tools?

Well, to be serious, all these programs in amiga-land, they are really nice but... just nice. None of these did make me happy, there was always something missing, either a good user interface or lots of functions. Then I decided to do something by myself instead of being annoyed ;-)) by those nice things that are sold by 100.- DM or over. But there was a handicap: I knew it would be hard work and the only programming languages I was able to code those days were Basic and 68000-Assembler.

The breakthrough came with receiving Amiga-E (© by Wouter van Oortmerssen). But that is another story ([thanks...](#)).

Then I coded a sample editing program with lots of functions and an useful user interface (as I think 8-). It is able to load RAW-Data, IFF-8SVX and even the PC-WAVE 8-Bit format. It supports a big editing window and [double buffering](#) to use only about 5K of CHIP mem as long as enough FAST mem is available.

I hope you find this tool useful for projects of your own.

1.6 System requirements...

WHAT DO I NEED TO RUN SAMPLE EDITOR

Well, that's easy to tell. An Amiga computer with at least Kick 2.0 and 512k RAM. It will run best on an A1200 with HD and 2 Megs of CHIP, 4 Megs FAST and Blizzard 1220 28MHz (like mine 8-). Sample Editor uses the asl.library. To work with the German (and maybe later more) language you'll need at least Kickstart-Workbench V2.1+ and the Locale.Library. Since version V1.3a also the BevelBox.Library is used.

1.7 Here I am...

ADDRESS

Contact me for registration, music, demo and gfx-swapping or any other legal reason by snail-mail:

Dario Abatianni (hey, that's me! 8-)

Buchenstraße 34

42699 Solingen

GERMANY

As I don't own an email address (yet? 8-)) I can only receive ordinary mail.

1.8 How to install Sample Editor...

INSTALLATION

This is really easy. Just copy all files in the SampleEditor drawer to your preferred tools drawer. Place your personal .keyfile (if you are using a registered version) into either your DEVS:, L:, S:, ENVARC: (and ENV:), or the Sample Editor directory. At last copy the files in the "SampleEdFonts" drawer to your FONTS: directory and the **BevelBox.Library** to your LIBS: drawer.

That's it.

1.9 The BevelBox.Library

THE BEVELBOX.LIBRARY

This library was developed to easily draw nice looking 3D boxes into own windows, without messing around with the GadTools.Library. Here is a list of the functions:

-30 (-\$1e) BevelBox(rastport,left,top,right,bottom,style,colour)

(A2, A1, A0, D3, D2, D1 ,D0)

-36 (-\$24) BevelBoxWH(rastport,left,top,width,height,style,colour)

(A2, A1, A0, D3, D2, D1, D0)

The parameter 'Style' sets the look of the BevelBox.

0 - BEVEL_BUTTON (a typical 'button' gadget)

1 - BEVEL_RECESSED (a pressed 'button')

2 - BEVEL_WALL (normal border for text input)

3 - BEVEL_GROOVE (to seperate different sections)

'Colour' sets the fill colour inside the box. If the background should be preserved, put a -1 in there.

At this point again thanks to Wouter van Oortmerssen. Because of the new version V3.2a of Amiga-E I was able to write such a Library myself.

1.10 Main documentation overview...

OVERVIEW

- 1 The Sample-Editor window
 - 2 Menus and gadgets
 - 3 Other functions
 - 4 ARexx-Commands
 - 5 Supported sample formats
 - 6 Program history
 - 7 Known bugs
-

1.11 What's on the screen?

1. THE EDITOR WINDOW

Sample Editor will open a 640x256 window on the workbench. The upper half of it is occupied by a sample display. It will show you the waves of the currently selected sample. If no sample is selected, only a blue line in the middle of this monitor is shown.

Under the display, a slider is placed, that is only used with the "Zoom" function. Use this slider to move the display around in the sample.

Below this the names of the loaded samples are displayed in a scroller list. Sample Editor may hold a number of 64 samples at one time. Five of them are always visible, the others may be found by dragging the slider at the right edge of the list.

Right of them there are the "tiny gadgets". These are fitted with graphics that describe their functions.

On the right side you can see the parameter field. In here all important data of the sample is displayed: **Sample length** , **Sample rate** , **Start mark** , **End mark** , the **location** of the sample in memory and the **type of memory** , the sample uses.

Below these two fields the function **gadgets** are placed. Here you find the most important functions Sample Editor supports.

To the right of them you see the current volume. You can set it from 0 to 63 by using the small slider or clicking once onto the number.

Below there is a long slider. Use this to set the playback speed. The two gadgets on both sides are for doubling and halving this speed (useful with the Double/Halve Frequency functions).

The box at the bottom of the window is used to show some messages to you.

In the window title bar the current memory available will be displayed, the amount of free CHIP, FAST and TOTAL memory. Also the **default save mode** (8SVX, RAW or ASK) is displayed there.

1.12 What are those numbers for?

PARAMETERS

The sample length represents the amount of bytes in your memory that it needs.

The sample rate is the speed used to play the sample. A sample rate of 8363 Samples/s means that in one second 8363 bytes are played by your audio chip (PAULA).

Start and end markers may be set by pressing the left mouse button inside the sample monitor, as long as a sample is displayed. This is called "range marking". This two numbers now show you the positions of those markers in the sample.

The location of the sample is only shown to check the correct positions for those "professional programmers". Also the **type of memory** is displayed.

1.13 What the hell is...

DOUBLE BUFFERING

Sample Editor uses a technique called "double buffering" to save precious CHIP-Memory. Therefor the sample is mainly loaded into FAST-Memory, only a small part of it will be copied into CHIP-Memory when played. Using this technique it is possible to play samples longer than 128k.

1.14 In the upper row...

MENUS

NOTE All of the function gadgets are found as menu items, too. So they will not be further documented. The "tiny gadgets" are the little graphics between the sample names and the parameter field.

1. Project menu

1.1 Clear All... (Gadget) Shortcut: RAmiga+L

Deletes all samples from memory and clears the copy buffer

1.2 Open... (Tiny gadget) Shortcut: RAmiga+O

Pops up an ASL-Requester to ask which sample you want to load. Also multiselect is possible. Just click on the "ALL" gadget and see what happens.

1.3 Save (Tiny gadget) Shortcut: RAmiga+S

Writes the sample data using the current name and directory to disk or harddrive.

1.4 Save as... Shortcut: RAmiga+A

Pops up an ASL-Requester to ask, which name to use for saving. If a file with the chosen name is already present in that directory, the program will ask you, if you want to overwrite the old file with the new. This is done to prevent accidental erasing of samples with the same name.

1.5 About Shortcut: RAmiga+?

Some information about this program and the author.

1.6 Iconify Shortcut: RAmiga+W

Turns Sample Editor into a small window, that can be stored everywhere on the screen. To bring Sample Editor back to life, just click on the close gadget or press the right mouse button when the window is active.

1.7 Quit... Shortcut: RAmiga+Q

Well... You are able to leave here, if you want. Sample Editor will automatically ask if there are still some samples in memory.

2. Edit menu

2.1 Cut range (Gadget "Cut") Shortcut: RAmiga+X

Cuts out the marked range and puts it into the copy buffer.

2.2 Copy range (Gadget "Copy") Shortcut: RAmiga+C

Puts the range into the copy buffer, but leaves the source sample untouched.

2.3 Paste range (Gadget "Paste") Shortcut: RAmiga+V

Replaces the sample data of the destination sample with the contents of the copy buffer. NOTE that this will only be done for the length of the marked destination range. If no destination range is set, the copy buffer will be pasted to the beginning of the destination sample.

2.4 Insert range (Gadget "Insert") Shortcut: RAmiga+I

Nearly like "Paste range" but splits the destination sample at the start marker and inserts the contents of the copy buffer. The selected destination sample will grow longer with this.

2.5 Append range (Gadget "Append") Shortcut: RAmiga+"+"

Adds the copy buffer to the end of the destination sample. It will grow longer by this. If you select append on an empty sample, a new sample with an user defined name will be created for you.

2.6 Mix range (Gadget "Mix") Shortcut: RAmiga+M

Works just like "Paste range" but mixes the source and destination data. So you can hear both samples afterwards.

2.7 Range all (Gadget)

Simply marks the complete sample.

2.8 Range off (Gadget)

Huh... It clears the markers. Surprised?

2.9 Find zero forward Shortcut: RAmiga+">"

Sets the end marker to the next zero byte in the sample.

2.10 Find zero backwards Shortcut: RAmiga+"<"

Sets the start marker to the previous zero byte in the sample.

3. Sample menu

3.1 Play (Gadget) Shortcut: RAmiga+P

Plays the selected sample. If the looping switch (see 3.3) is set to "on", the sample will be played over and over again, until the "Stop" gadget (which had been the "Play" gadget) is pressed. You may alter the playback rate while listening.

3.2 Play range (Gadget "Range") Shortcut: RAmiga+R

Plays the area between the start and end marker. If the looping switch (see 3.3) is set to "on", it will be played over and over again, until the "Stop" gadget is pressed. You may alter the playback rate while listening.

3.3 Looping switch (Tiny gadget) Shortcut: RAmiga+T

Set this switch to "on" (a checkmark is shown in front of this text when set) to play a sample or a sample range continuously.

3.4 Filter switch (Tiny gadget) Shortcut: RAmiga+F

Enables or disables amiga's 7 kHz low pass filter (look at your power LED while playing a sample).

3.5 Zoom range (Tiny gadget) Shortcut: RAmiga+Z

Shows the ranged area on the sample monitor. You may move this area by using the long slider below the sample display.

3.6 Discard... (Gadget) Shortcut: RAmiga+D

Deletes after a security requester a sample from memory.

3.7 Duplicate (Gadget)

Duplicates an existing sample (useful for testing unknown effects to get back the original sample)

3.8 Rename... (Tiny gadget) Shortcut: RAmiga+N

Why... You can call your samples by own defined names, amazing! In the appearing window you can alter the current name to your very own idea. Select "Rename" or press the "Return" key to use the new name, choose "Cancel" to quit and keep the old name.

4. Effects menu

NOTE Most of these effects work on the whole sample or the selected range (except "Resample" "Double/Halve Frequency").

4.1 Backwards (Gadget "Backwards")

Turns around the sample byte by byte, that is, it will be played from the end to the beginning.

4.2 Scale... (Gadget)

Amplifies or damps the amplitudes of a sample by a given percentage. The effect is a change of volume. NOTE that a scale by 0% means, the sample is completely empty. Additional scaling will have no effect then anymore. Use the slider to set the new volume in %. "Scale" will start

the calculation, "Cancel" quits.

4.3 Fade in (Gadget)

Fades the volume from 0 (no sound) to 100% (full volume).

4.4 Fade out (Gadget)

Fades the volume from 100% to 0 (as it is done in most pop songs).

4.5 Mute (Gadget)

Fills the sample (or range) with 0 (no sound). Useful to kill noise in silent parts of the sample.

4.6 Double Frequency (Tiny gadget)

Deletes every second byte of the sample. It will sound with the double frequency as before.

4.7 Halve Frequency (Tiny gadget)

Inserts every second byte an additional byte to stretch it to double length. For best sound quality this additional byte is calculated by interpolating the values of the two bytes between it is inserted.

4.8 Resample... (Gadget)

Modifies the data of the sample in a way that it will sound the same on a different play speed (needed for most music programs to set a C note sample to speed 8363 Samples/s or 16726 Samples/s). Use the slider to set the new playback speed or choose the "8363" gadget to calculate this speed directly.

4.9 Calculate Echo... (Gadget "Echo")

This is one of the most powerful effects in Sample Editor. It will add an echo effect to your sample. Choosing this function, you will get a window with three sliders and two gadgets to set the parameters for the effect. "Echo delay" is the time to wait before the echo will sound up. "Echo Volume" is the volume of the old signal that is now calculated over the existing data. "Scale data" is the volume of the existing data that is mixed with the echo signal. "Do Echo" starts the calculation, "Cancel" quits the echo effect window.

4.10 Distort

Calculates a distortion effect to the sample (I wouldn't do it but maybe you want to...)

4.11 Cut Positive Amp

Cuts all positive waves from the sample.

4.12 Cut Negative Amp

Same as 4.11 but now for negative waves.

4.13 Wrap Negative

All negative waves are wrapped up to be positive ones.

4.14 Normalize (Gadget)

Calculates the maximum scaling possible without clipping (the highest volume possible). NOTE that existing noises will get louder too.

4.15 Adjust DC-Offset (Tiny gadget)

Some samples don't alter their waves about the correct 0 position. This function will drag the sample to its correct position. In some cases it is necessary to do this two or three times but this is rare.

4.16 Chorus...

This function calculates an effect for your sample, that will let it sound as if there were more than one instrument. Try the depth and delay values for different results.

5. Settings menu

5.1 Default Save Mode...

Sample Editor may save your samples in IFF-8SVX or in RAW format. To keep from asking every time you save a sample you set the saving mode once and alter it only if it's necessary. The current saving mode is displayed in the window title bar as "8SVX" "RAW" or "ASK". If you set the "Ask" gadget, Sample Editor will ask you during the next save operation, which saving mode you want. Afterwards it will use this mode for all further samples.

5.2 Default Play Speed...

Samples loaded from "RAW" or "PC-WAVE" data don't have an information of the playback speed to use. So Sample Editor has to use a speed on its own. Here you can set this speed manually. You may choose of "8363" (default), "10000" or the current used. "Cancel" will quit without changes.

5.3 Visual Wave Mode...

There are two ways of displaying a sample : by waves or by amplitude values. Just try and see which one you like best.

5.4 Range Drawing Mode...

Sample Editor is able to show the marked range in two different ways: as a filled block or as a frame. Set this in the appearing requester.

5.5 Save settings

Simply stores your current settings in your ENV: and ENVARC: drawers.

5.6 Load settings

As you might have guessed, this function restores previously saved settings from disk.

Well, that's it for the menus. As said above, the gadgets are only an alternative way to choose the most needed functions. You'll find their description in the text about the menus.

1.15 What else do we have...

OTHER FUNCTIONS

- o The up/down arrow keys may be used to step through the sample list.
- o The left/right arrow keys decrease/increase the playback speed by 100.
- o Holding the SHIFT key while marking a range will set only one of the markers, the other will stay at its place. So you may keep the old range and alter only one side of it.
- o You may play the sample alternatively with the keyboard. I used for this purpose the standard Protracker keymap:

S D G H J Ö 1 2 4 5 6 8

Y X C V B N M , . Q W E R T Z U I O

Press the SPACE key to play the sample using the selected playing speed.

- o Select one of the four pre-defined playback rates by pressing F6 to F9. The key F10 gives you back the original playback rate that was used when you loaded the sample.

- o Pressing the HELP key will turn up this document. You may work on with having this docs installed in the background.

- o If you launched Sample Editor from your Workbench, it will look for the following tooltypes:

SAMPLEDIR=<path> /* specifies the path, where your samples are located */

/* e.g.: SAMPLEDIR=SYS:Sounds */

PATTERN=<#?> /* sets the search pattern for the file requester */

/* e.g.: PATTERN=#?.8SVX */

DOCVIEW=<path> /* sets the path of your documentation file */

/* e.g.: DOCVIEW=Docs/SampleEditor.guide */

- o The same keywords (or their abbreviations DIR, PAT and DOC) may be used from the CLI, too.

Example:

```
SampleEditor DIR SAMPLES: PAT #?.8SVX DOC Docs/SampleEditor.guide
```

NOTE The keyword »DOC« must be the last argument in the line.

1.16 How to use the port...

ARexx-Commands

Here is a list of the available ARexx-Commands and their syntax. All return values of the functions are stored in the variable 'rc'. The name of the ARexx-Port is 'SampleEdPort'.

length=GetLength rate=GetRate

name=GetName left=GetLeftmarker
right=GetRightmarker number=GetSlot
*number=NextSlot *number=PreviousSlot
*number=Duplicate mem=SelectSlot <value>
SetRate <value> SetLeftMarker <value>
SetRightMarker <value> number=Load <name>
Save Cut
Copy Paste
Insert Append
Mix RangeAll
RangeOff FindZeroForward
FindZeroBackwards Discard
Rename <name> Backwards
Scale <percent> FadeIn
FadeOut Mute
DoubleFrequency HalveFrequency
Resample <value> *Echo <delay> <volume> <scale>
Distort CutPositiveAmplitudes
CutNegativeAmplitudes WrapNegative
Normalize AdjustDCOffset
*Chorus <depth> <speed> *DefaultSaveMode <8SVXIRAW|ASK>
*DefaultPlaySpeed <value> VisualWaveMode <AMPLITUDES|WAVES>
RangeDrawingMode <FRAME|BLOCK> LoadSettings
SaveSettings Quit
The commands marked '*' are not yet implemented...

1.17 Last but not least...

THANK YOU - THANK YOU - THANK YOU

I'd like to thank the following guys:

1. Wouter van Oortmerssen (\$#!):

"It was dark, I could not see, but then there was a light at the end..."

Those were my thoughts when I received your Amiga-E compiler. Until then all programming languages weren't that good. Basic's too lame, 68000-Ass is very fast but uncomfortable. C is too messy, Pascal too strict...

Amiga-E is fun!

2. Markus B. from W.:

for the french translation, some very good tips and moral support (It's fun to have you sitting beside me and reading/writing stories... 8-)

3. Peter K. from S.:

for beta-testing and more.

4. Ulrich T. from M.:

for entertainment ;-)

5. Alfred B. from S.:

for copying me Amiga-E. You don't know what you **really** did with this.

6. Martin Laubach:

for ARQ. It's just better working with your requester installed 8-D .

7. The guy who sold me his A1200HD 213MB... (he now owns an NES 8-D)

1.18 All that I know...

KNOWN SAMPLE FORMATS

1. IFF-8SVX (8 bit MONO): This is one of the most used sample formats on the amiga. It provides, as all IFF-formats do,

the possibility to store data in own defined

LOAD/SAVE chunks. Sample Editor does so with adding a

"MARK" chunk, in which it stores the start and

end marks of the sample when set.

2. RAW DATA (8 bit MONO): This is currently the most used sample format. It consists only of the bare sample wave data

LOAD/SAVE without any further information like playback

speed, marker positions etc.

3. WAVE (8 bit MONO): On MS-DOS machines (Intel outside ;-) the ruling standard for storing samples. I included this for

LOAD ONLY easy converting of PC-Samples (look at those CD-ROM libraries... 8-)

1.19 What's new since V1.0?

V1.4 (03.11.1995)

- Uses at last the 'audio.device'. Double-Buffering reduced to 4 KB.

V1.3a (28.10.1995)

- Makes use of the BevelBox.Library (included).

- Doesn't use the VBeam anymore to prevent timing problems.

- Flickering while range marking mostly removed.

- Various optimisations in the source code.

V1.3 (12.06.1995)

- Added ARexx-Port.
- Fixed problem with CLI-Arguments.
- Built in chorus effect.
- Better handling of the HELP key.

V1.3 (14.05.1995)

- Added keyboard commands F6, F7, F8, F9, F10, SPACE.
- Removed bug with keyboard and samples >20kB.
- Improved text placement in the windows.
- Improved menu layout.
- Included french .catalog file.
- Added tiny buttons.

V1.2 (16.03.1995)

- Spelling errors in German catalog corrected.

V1.2 (21.02.1995)

- Added CLI-Arguments SAMPLEDIR=DIR, PATTERN=PAT and DOCVIEW=DOC.
- Various smaller enhancements to the source code.
- Improved gadget handling.
- Sample monitor turned around.

V1.2 (07.02.1995)

- Now supports the Locale.Library.
- German catalog written.
- German documentation written.
- .keyfile may be stored in either the DEVS: L: S: ENV: or current drawer.

V1.1 (13.01.1995)

- Added ToolTypes SAMPLEDIR, PATTERN and DOCVIEW

V1.1 (14.12.1994)

- Added gadgets for doubling/halving of the playback speed.
- Sample Editor had some trouble reading IFF-samples, if their chunks were not at LONG-Borders. This is now fixed.
- Zoom Range is now able to be moved around.

V1.0 (16.11.1994)

- First beta-Release.
-

1.20 I'm sorry, but...

KNOWN BUGS

o The Zoom function displays at the end of the sample some data, that is actually no part of the sample. I'll fix this soon, but until then it won't cause any trouble, I think.

o By now the user interface isn't font sensitive (except the menus). But this will change, too (now that I own a multiscan monitor :-)